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(54) **OPTICAL DISK PROTECTIVE FILM AND  
SPUTTERING TARGET FOR FORMATION OF  
THAT PROTECTIVE FILM**

(57) Abstract:

PROBLEM TO BE SOLVED: To permit DC sputtering, to decrease the production of particles to increase the production efficiency, and to provide a protective film having large transmittance and low reflectance by using a sputtering target essentially comprising ZnO and if necessary by adding other oxides.

SOLUTION: The sputtering target for the formation of

an protective film of an optical disk is produced by sintering one or more oxides of ZnO, In<sub>2</sub>O<sub>3</sub> and SnO<sub>2</sub> as the main component with addition of Al<sub>2</sub>O<sub>3</sub> or Ga<sub>2</sub>O<sub>3</sub> if necessary by 0.1 to 20 wt.%. The content of Al<sub>2</sub>O<sub>3</sub> and Ga<sub>2</sub>O<sub>3</sub> is preferably controlled to 0.1 to 20 wt.%, and thereby, the bulk electric resistance of the target can be controlled and the transmittance in the visible ray region of the protective film after the protective film is formed can be maintained to  $\geq 80\%$ . Further, ZrO<sub>2</sub> and/or TiO<sub>2</sub> are incorporated by 0.01 to 5 wt.%.

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